

ABSTRACT

ABSTRACT OF THE DISCLOSURE

A device supplies an output value Y in response to an input value X in accordance with a given function F. The function F can be, for example, a gamma correction function for a video signal. The device operates as follows. An input section (INP) derives a table input value (XT) and an interpolator input value (XI) from the input value (X). A table (TBL) supplies a table value (YT) in response to the table input value (XT). An interpolator (INT) supplies an interpolation value (YI) in response to the interpolator input value (YI). An output section (OUT) combines the table value (YT) and the interpolation value (YI) so as to obtain the output value (Y).

The input section (INP) ^{includes} ~~comprises~~ an interval detector (DET) which defines a plurality of input value intervals (I1, I2). This detector (DET) supplies an interval indication (IND) which indicates the interval (I1) in which the input value (X) lies. The input section (INP) ^{includes} ~~comprises~~ an input value former (IVC) for forming the table input value (XT) and the interpolator input value (XI) in dependence on the interval indication (IND). The table input value (XT) and the interpolator input value (XI) are determined, respectively, by a more significant part (MSP) of the input value and the complementary less significant part (LSP) of variable magnitudes in accordance with the interval indication (IND).

~~By means of such a device a satisfactory accuracy of the output value can be obtained while the table is of a moderate size.~~

20 ~~Figure 1.~~